

CONTROLLER-PILOT DATA LINK COMMUNICATIONS (CPDLC)

CPDLC-1A MESSAGE SET

1. Uplink Messages

1.1 The uplink messages for CPDLC-1A are presented in this section.

Table A-1: Responses/Acknowledgements (uplink)

	Message Intent/Use	Message Element	URG	ALRT	RESP
0	Indicates that ATC cannot comply with the request.	UNABLE	N	M	N
1	Indicates that ATC has received the message and will respond.	STANDBY	N	L	N
3	Indicates that ATC has received and understood the message.	ROGER	N	L	N

Table A-2: Vertical Clearances (uplink)

	Message Intent/Use	Message Element	URG	ALRT	RESP
19	Instruction to maintain the specified level.	MAINTAIN (<i>level</i>)	N	M	W/U
20	Instruction that a climb to a specified level is to commence and once reached the specified level is to be maintained.	CLIMB TO (<i>level</i>)	N	M	W/U
23	Instruction that a descent to a specified level is to commence and once reached the specified level is to be maintained.	DESCEND TO (<i>level</i>)	N	M	W/U

Note. Wherever the variable (level) is specified, the message can specify either a single level or a vertical range, i.e. block level.

Table A-5: Route Modifications (uplink)

	Message Intent/Use	Message Element	URG	ALRT	RESP
74	Instruction to proceed directly from its present position to the specified position.	PROCEED DIRECT TO (<i>position</i>)	N	M	W/U
80	Instruction to proceed via the specified route.	CLEARED (<i>route clearance</i>)	N	M	W/U
190	Instruction to fly on the specified heading.	FLY HEADING (<i>degrees</i>)	N	M	W/U

Table A-6: Speed Changes (uplink)

	Message Intent/Use	Message Element	URG	ALRT	RESP
106	Instruction that the specified speed is to be maintained.	MAINTAIN (<i>speed</i>)	N	M	W/U
108	Instruction that the specified speed or a greater speed is to be maintained.	MAINTAIN (<i>speed</i>) OR GREATER	N	M	W/U
109	Instruction that the specified speed or a lesser speed is to be maintained.	MAINTAIN (<i>speed</i>) OR LESS	N	M	W/U

Table A-7: Contact/Monitor/Surveillance Requests (uplink)

	Message Intent/Use	Message Element	URG	ALRT	RESP
117	Instruction that the ATS unit with the specified ATS unit name is to be contacted on the specified frequency.	CONTACT (<i>unit name</i>) (<i>frequency</i>)	N	M	W/U
120	Instruction that the ATS unit with the specified ATS unit name is to be monitored on the specified frequency.	MONITOR (<i>unit name</i>) (<i>frequency</i>)	N	M	W/U

Table A-8: Report/Confirmation Requests (uplink)

	Message Intent/Use	Message Element	URG	ALRT	RESP
135	Instruction to confirm and acknowledge the currently assigned level.	CONFIRM ASSIGNED LEVEL	N	L	Y
231	Instruction to indicate the pilot's preferred level.	STATE PREFERRED LEVEL	L	L	Y

Table A-10: Air Traffic Advisories (uplink)

	Message Intent/Use	Message Element	URG	ALRT	RESP
213	ATS advisory that the specified altimeter setting relates to the specified facility.	(<i>facility designation</i>) ALTIMETER (<i>altimeter</i>)	N	L	R
157	Notification that a continuous transmission is detected on the specified frequency. Check the microphone button.	CHECK STUCK MICROPHONE (<i>frequency</i>)	U	M	N

Table A-11: System Management Messages (uplink)

	Message Intent/Use	Message Element	URG	ALRT	RESP
159	A system generated message notifying that the ground system has detected an error.	ERROR (<i>error information</i>)	U	M	N
160	Notification to the avionics that the specified data authority is the Next Data Authority. If no data authority is specified, this indicates that any previously specified Next Data Authority is no longer valid.	NEXT DATA AUTHORITY (<i>facility</i>)	L	N	N
162	Notification that the ground system does not support this message.	SERVICE UNAVAILABLE	L	L	N
163	Notification to the pilot of an ATSU identifier.	(<i>facility designation</i>)	L	N	N
227	Confirmation to the aircraft system that the ground system has received the message to which the logical acknowledgement refers and found it acceptable for display to the responsible person.	LOGICAL ACKNOWLEDGEMENT	N	M	N
233	Notification to the pilot that messages sent requiring a logical acknowledgement will not be accepted by this ground system.	USE OF LOGICAL ACKNOWLEDGEMENT PROHIBITED	N	M	N

Table A-12: Additional Messages (uplink)

	Message Intent/Use	Message Element	URG	ALRT	RESP
165	Used to link two messages, indicating the proper order of execution of clearances/ instructions.	THEN	L	N	N
183		<i>(free text)</i>	N	M	N
196		<i>(free text)</i>	N	M	W/U
203		<i>(free text)</i>	N	M	R
205		<i>(free text)</i>	N	M	A/N

Note. ✍ Free text message elements have no associated message intent. The capability to send a free text message with any of the attribute combinations already used in the message set have been provided for in the technical requirements of the ATN (Annex 10, Volume III, Part I, Chapter 3).

2. Downlink Messages

2.1 The downlink messages for CPDLC-1A are presented in this section.

Table A-13: Responses (downlink)

	Message Intent/Use	Message Element	URG	ALRT	RESP
0	The instruction is understood and will be complied with.	WILCO	N	M	N
1	The instruction cannot be complied with.	UNABLE	N	M	N
2	Wait for a reply.	STANDBY	N	M	N
3	Message received and understood.	ROGER	N	M	N
4	Yes.	AFFIRM	N	L	N
5	No.	NEGATIVE	N	L	N

Table A-14: Vertical Requests (downlink)

	Message Intent/Use	Message Element	URG	ALRT	RESP
6	Request to fly at the specified level.	REQUEST (<i>level</i>)	N	L	Y

Table A-19: Reports (downlink)

	Message Intent/Use	Message Element	URG	ALRT	RESP
38	Read-back of the assigned level.	ASSIGNED LEVEL (<i>level</i>)	N	M	N
106	Notification of the preferred level.	PREFERRED LEVEL (<i>level</i>)	L	L	N

Table A-22: System Management Messages (downlink)

	Message Intent/Use	Message Element	URG	ALRT	RESP
62	A system generated message that the avionics has detected an error.	ERROR (<i>error information</i>)	U	L	N
63	A system generated denial to any CPDLC message sent from a ground facility that is not the current data authority.	NOT CURRENT DATA AUTHORITY	L	L	N
99	A system generated message to inform a ground facility that it is now the current data authority.	CURRENT DATA AUTHORITY	L	L	N
107	A system generated message sent to a ground system that tries to connect to an aircraft when a current data authority has not designated the ground system as the NDA.	NOT AUTHORIZED NEXT DATA AUTHORITY	L	L	N
100	Confirmation to the ground system that the aircraft system has received the message to which the logical acknowledgement refers and found it acceptable for display to the responsible person.	LOGICAL ACKNOWLEDGEMENT	N	M	N

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